

1           1. A method for inhibiting rejection by a recipient  
2 animal of a transplanted tissue, said method comprising  
3 modifying, eliminating, or masking an antigen which, when  
4 present on the surface of a cell of said tissue, is capable  
5 of causing a T-lymphocyte-mediated response in said animal,  
6 to inhibit antigen-mediated interaction between said cell  
7 and a T-lymphocyte of said animal without causing lysis of  
8 said cell.

1           2. The method of claim 1 wherein said inhibiting  
2 comprises masking said antigen by treating said tissue with  
3 a non-lytic masking agent which is capable of forming a  
4 complex with said antigen on said cell.

1           3. The method of claim 1 wherein said inhibiting  
2 comprises modifying said antigen by capping.

1           4. The method of claim 1 wherein said inhibiting  
2 comprises eliminating said antigen by inhibiting expression  
3 of said antigen on said cell.

1           5. The method of claim 4 wherein said antigen is an  
2 HLA class I antigen and said expression inhibiting comprises  
3 transfection of said cell with a fragment of a viral genome  
4 which decreases HLA class I expression.

1           6. The method of claim 1 wherein said inhibiting  
2 comprises eliminating said antigen by harvesting said tissue  
3 from a transgenic animal which has diminished capacity to  
4 express said antigen on the surface of said cell.

1           7. The method of claim 6 wherein said antigen is an  
2 HLA class I antigen.

1 8. The method of claim 7 wherein said transgenic  
2 animal exhibits decreased beta-2 microglobulin expression.

1 9. The method of claim 7 wherein said transgenic  
2 animal exhibits decreased HLA class I antigen expression.

1 10. The method of claim 1 wherein said cell is an  
2 islet cell.

1 11. The method of claim 1 wherein said tissue and  
2 said animal are of different species.

1 12. The method of claim 1 wherein said tissue and  
2 said animal are of the same species.

1 13. The method of claim 1 wherein said antigen is  
2 an HLA class I antigen.

1 14. The method of claim 2 wherein said masking  
2 agent comprises an antibody or fragment thereof.

1 15. The method of claim 14 wherein said antibody is  
2 monoclonal.

1 16. The method of claim 14 wherein said antibody  
2 comprises a polyclonal antiserum against said tissue.

1 17. The method of claim 14 wherein said antibody is  
2 an F(ab')<sub>2</sub> fragment.

1 18. The method of claim 2 wherein said antigen is  
2 an HLA class I antigen and a cytotoxic CD8+ lymphocyte of

3 said animal is inhibited, by said masking agent, from  
4 interacting with said HLA-class I antigen on said cell.

1 19. The method of claim 2 wherein said antigen is  
2 an LFA-3 molecule and a cytotoxic CD2+ lymphocyte of said  
3 animal is inhibited, by said masking agent, from interacting  
4 with said LFA-3 molecule on said cell.

1 20. The method of claim 2 wherein said antigen is  
2 an ICAM-1 molecule and a cytotoxic LFA-1+ lymphocyte of said  
3 animal is inhibited, by said masking agent, from interacting  
4 with said ICAM-1 molecule on said cell.

1 21. A tissue sample for transplantation into an  
2 animal, said tissue containing cells of a type normally  
3 bearing a surface antigen capable of causing a T-lymphocyte-  
4 mediated response in said animal, wherein said antigen on  
5 cells of said tissue sample is modified, masked, or has been  
6 eliminated to decrease said T-lymphocyte-mediated response.

1 22. The tissue sample of claim 21 wherein said  
2 cells comprise genetically engineered cells with increased  
3 capacity to express a cellular component.

1 23. The tissue of claim 21 wherein said antigen is  
2 an HLA class I antigen.

1 24. The tissue of claim 21 wherein said antigen is  
2 an HLA class II antigen.

1 25. The tissue of claim 21 wherein said antigen is  
2 masked with an F(ab')<sub>2</sub> fragment of an antibody.

1           26. The tissue of claim 26 wherein said F(ab')<sub>2</sub>  
2 fragment comprises a polyclonal antisera generated against  
3 said tissue.

1           27. The tissue of claim 21 wherein said cells are  
2 islet cells.

1           28. The tissue of claim 21 wherein said cells are  
2 muscle cells.

1           29. The tissue of claim 21 wherein said cells are  
2 liver cells.

3           30. The tissue of claim 21 wherein said cells are  
4 neuronal cells.

1           31. The tissue of claim 21 wherein said tissue  
2 comprises heart tissue.

1           32. The tissue of claim 21 wherein said tissue  
2 comprises lung tissue.

1           33. The tissue of claim 21 wherein said tissue  
2 comprises liver tissue.

1           34. The tissue of claim 21 wherein said tissue  
2 comprises kidney tissue.

1           35. A method for inhibiting rejection by a  
2 recipient animal of a transplanted tissue containing cells

3 bearing a surface antigen capable of causing a T-lymphocyte-  
4 mediated response in said animal via a receptor molecule on  
5 said T-lymphocyte of said animal, said method comprising  
6 transfecting said cells with DNA encoding a secretable  
7 protein or peptide capable of binding to said receptor  
8 molecule to competitively inhibit binding of said T-  
9 lymphocyte to said cells of said tissue via said receptor.

Add A'

Add B3

add  
D3